

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

pplicant

Toshio NAKAGISHI

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Group Art Unit: 2834

Appl.. No.

10/067,**9/**37

Filed

February 8, 2002

For

GALVANO MIRROR UNIT

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner of Patents Washington, DC 20231

Sir:

Pursuant to the duty of disclosure set forth in 37 C.F.R. § 1.56 and in accordance with 37 C.F.R. § 1.97 and § 1.98, the following information is brought to the attention of the Examiner assigned to the above-referenced application.

Applicant notes that the information cited below was cited by either the Applicant or the Examiner during the prosecution of the parent application, U.S. Patent Application No. 09/493,676, filed January 28, 2000 (of which the present application claims priority under 35 U.S.C. §120), which is now U.S. Patent No. 6,376,953, issued on April 23, 2002, or the grandparent application, U.S. Patent Application No. 09/102,273, filed June 22, 1998, which has been abandoned.

U.S. Patent 5,920,140 to T. NAKAGISHI et al., which issued July 6, 1999;

"Optical Magnetic Disk Device Of U.S. TeraStor Succeeds Tracking Control - Track Pitch Of $0.34 \,\mu m$ Realized Using Two-Stage Servo", which appeared at pages 13 and 14 of the Japanese language magazine Nikkei Electronics, September 22, 1997 (no. 699). Applicant notes that this article discloses a drawing on page 13 generally corresponding to Fig. 1 of the above-captioned application;

"Trillions Of Bytes", by Eric Nee, which appeared in the March 24, 1997 issue of Forbes magazine;

PCT Application WO 98/06095, which is assigned to TeraStor and entitled "Positioning An Optical Beam", was filed on July 31, 1997 and published on February 12, 1998. Applicant notes that this reference discloses a fixed optical module (FOR) mounted to an actuator, with a relay lens positioned between a laser and a Galvano mirror. This reference also indicates that a single FOR may be employed, in conjunction with a prism or mirror, to direct light rays to an upper actuator arm or a lower actuator arm;

PCT Application WO 98/49675, which is assigned to TeraStor, was filed on April 29, 1997 and published on November 5, 1998. Applicant notes that this document discloses a near-field configuration that employs a solid immersion lens (SIL). A relay lens is positioned between the laser and the plate (prism). In addition, page 127 of the document discloses that a single optical module may be used to scan two disk surfaces;

PCT Application WO 98/49684, which is assigned to TeraStor, was filed on April 28, 1998 and published on November 5, 1998. Applicant notes that this document is directed to a disk cartridge storage device that protects a disk from contaminants, such as, for example, dust and fingerprints;

U.S. Patent 5,422,872 to HSU et al., which is assigned to Maxoptix Corporation, which issued June 6, 1995;

A screen capture of a page from TeraStor's website (dated March 19, 1997) entitled "Architecture of TeraStor's Near-Field Technology". Applicant notes that this drawing generally corresponds to Fig. 2 of the above-captioned application;

"In 1998, 10 GB Per Inch² Is Realized Using New Optical Recording Technology", appeared at pages 148-151 of the September, 1997 Japanese language edition of Nikkei Byte magazine. Applicant notes that Fig. 2 on page 149 of the article generally corresponds to Fig. 2 of the above-captioned application;

- U.S. Patent 5,173,797 to ZEDEKAR et al., which issued December, 1992;
- U.S. Patent 5,811,903 to UENO et al., which issued September, 1998;
- U.S. Patent 4,613,778 to WROBEL et al., which issued September, 1986;
- U.S. Patent 4,700,251 to FUKE et al., which issued October, 1987;
- U.S. Patent 5,811,902 to SATO, which issued September, 1998;
- U.S. Patent 6,166,889 to AOKI, which issued December, 2000;

- U.S. Patent 5,719,834 to FUTAGAWA et al., which issued February 17, 1998;
- U.S. Patent 5,844,676 to SOUTHAM et al., which issued December 1, 1998;
- U.S. Patent 5,705,868 to COX et al., which issued January, 1998;
- U.S. Patent 5,625,244 to BRADFIELD, which issued April, 1997;
- U.S. Patent 5,610,752 to HAYAKAWA, which issued March, 1997;
- U.S. Patent 5,608,280 to TAMEMOTO et al., which issued March, 1997;
- U.S. Patent 5,461,498 to IWAO, which issued October, 1995;
- U.S. Patent 5,254,893 to IDE, which issued October, 1993;
- U.S. Patent 4,351,596 to OHNIWA et al., which issued September, 1992;
- U.S. Patent 4,088,914 to AOKI, which issued May, 1978;
- U.S. Patent 3,244,917 to GUTE, which issued April, 1996;
- U.S. Patent 5,684,762 to KUBO, which issued November 4, 1997;
- U.S. Patent 5,125,750 to CORLE et al., which issued June 30, 1992. Applicant notes that this document is cited on page 9 of the above-captioned application;
 - U.S. Patent 4,968,876 to IIMA, which issued November 6, 1990;
 - U.S. Patent 4,297,713 to ICHIKAWA et al., which issued October 27, 1981;
 - U.S. Patent 5,126,899, to H. KANAZAWA, which issued June 30, 1992;
 - U.S. Patent 5,564,585, to N. SAITOH, which issued October 15, 1996;
 - U.S. Patent 5,768,241, to H. KANAZAWA et al., which issued June 16, 1998;

- U.S. Patent 2,750,461 to BUNCH, which issued June, 1956;
- U.S. Patent 4,126,796 to ITO, which issued November, 1978;
- U.S. Patent 5,886,438 to KAWANISHI, which issued March, 1999;
- U.S. Patent 4,206,379 to ONDA, which issued June, 1980;
- U.S. Patent 3,354,833 to LAING, which issued November, 1967;
- B.D. TERRIS et al., "Near-Field Optical Data Storage", Applied Physics Letters, Vol. 68, pp. 141-143, January 8, 1996. Applicant notes that this document is cited on page 9 of the above-captioned application;

Japanese Laid-Open Patent Publication No. SHO 64-2015 to H. YAMAMOTO et al., which was published on January 6, 1989; and

Japanese Patent Publication 8-315404, which was published on November 29, 1996, along with its English counterpart, U.S. Patent 5,764,613 to YAMAMOTO et al., which issued on June 9, 1998.

A copy of a United Kingdom Search Report issued in Great Britain Application

No. GB 9813948.8, dated December 10, 1998, was filed, in which the following documents

were cited:

Great Britain Patent Application GB 2193341 A, which was published on February 3, 1988, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive

step). The United Kingdom Examiner indicated Fig. 1 as being relevant with respect to claims 1, 27, 37 and 67 at least;

Great Britain Patent Application GB 2000604 A, which was published on January 10, 1979, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Figs. 3, 8 and 9 as being relevant with respect to claims 1, 27 and 67 at least;

Great Britain Patent Application GB 1457995 A, which was published on December 8, 1976, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 1 as being relevant with respect to claims 1, 27, 31, 35 and 67 at least;

Great Britain Patent Application GB 1314002 A, which was published on April 18, 1973, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 5 as being relevant with respect to claims 1, 27 and 67 at least;

Great Britain Patent Application GB 0378922 A, which was published on August 19, 1932, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 2 as being relevant with respect to claims 1, 27 and 67 at least;

European Patent Application EP 0790512 A1, which was published on August 20, 1997, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step), and as a "P" category document (i.e. indicating a document published on or after the declared priority date but before the filing date of this invention). The United Kingdom Examiner indicated Fig. 1 as being relevant with respect to claim 67 at least;

PCT Patent Application WO 90/08363 A1, which was published on July 26, 1990, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated the Figs. 1-2 as being relevant with respect to claims 1, 27 and 67 at least;

U.S. Patent 5,610,752 to HAYAKAWA, which issued March 11, 1997, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Figs. 1J, 2B and 3B as being relevant with respect to claims 1, 27, 37 and 67 at least;

U.S. Patent 5,596,446, to PLESKO, which issued January 21, 1997, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 1 as being relevant with respect to claims 1, 27 and 67 at least;

U.S. Patent 5,532,480, to SCOFIELD, which issued July 2, 1996, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 8 as being relevant with respect to claims 1, 27 and 67 at least;

U.S. Patent 4,891,998, to TOURVILLE, which issued January 9, 1990, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The Examiner indicated Fig. 1 as being relevant with respect to claims 1, 27, 37 and 67 at least; and

U.S. Patent 4,285,566 to YAMAMOTO, which issued August 25, 1981, was cited as an "X" category document, (i.e., indicating lack of novelty or inventive step). The United Kingdom Examiner indicated Fig. 1(A) as being relevant with respect to claims 1, 27 and 67 at least.

A copy of a United Kingdom Search Report issued in counterpart European Application No. GB 9823971.8, dated February 1, 1999, was filed, in which the following documents were cited:

U.S. Patent No. 5,517,474, to TAKAMINE, which issued May 14, 1996, was cited as an "A" category document, (i.e., indicating technological background and/or state of the art), with respect to claim 13;

U.S. Patent No. 5,444,683, to ISHIKAWA, which issued August 22, 1995, was cited as an "A" category document, (i.e., indicating technological background and /or state of the art), with respect to claim 13; and

U.S. Patent No. 4,959,824, to UEDA, which issued September 25, 1990, was cited as an "A" category document, (i.e., indicating technological background and/or state of art), with respect to claim 13.

A copy of a United Kingdom Search Report issued in counterpart Great Britain Application No. GB 9814042.9, dated March 15, 1999, was filed, in which the following documents were cited:

European Patent Application 0 448 362 A2, which was published on September 25, 1991, was cited as an "A" category document, (i.e., document indicating technological background and/or state of the art). The Examiner indicated Figures 2, 4 and 5 to be of relevance;

European Patent Application 0 084,728 A1, which was published on August 3, 1983, was cited as an "&" category document, (i.e., member of the same patent family), and an "A" category document, (i.e., document indicating technological background and/or state of the art). The Examiner indicated the whole document to be of relevance;

European Patent Application 0 084,727 A1, which was published on August 3, 1983, was cited as an "&" category document, (i.e., member of the same patent family), and an "A" category document, (i.e., document indicating technological background and/or state of the art). The Examiner indicated the whole document to be of relevance;

Great Britain Patent Application 2 086,092 A, which was published on May 6, 1982, was cited as an "A" category document, (i.e., document indicating technological background and/or state of the art). The Examiner indicated Figure 1 to be of relevance;

U.S. Patent No. 4,466,088 to TRETHEWEY, which issued August 14, 1984, was cited as an "&" category document, (i.e., member of the same patent family), and an "A" category document, (i.e., document indicating technological background and/or state of the art). The Examiner indicated the whole document to be of relevance; and

U.S. Patent No. 5,420,848 to DATE et al., which issued May 30, 1995, was cited as an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claim 28 of Great Britain Application No.9814042.9. The Examiner indicated the whole document, especially figures 2, 16 and 17 to be of relevance.

A copy of a United Kingdom Search Report issued in counterpart Great Britain Application No. GB 9814042.9, dated November 10, 1998, was filed, in which the following documents were cited:

European Patent Application 0 448 362 A2, which was published on September 25, 1991, was cited as an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 8, 14, 15, 19, 20 and 24-27 of Great Britain Application No.9814042.9. The Examiner indicated Figures 2, 4 and 5 to be of relevance;

European Patent Application 0 084,728 A1, which was published on August 3, 1983, was cited as an "&" category document, (i.e., member of the same patent family), and an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 8, 14, 15, 19 and 20 of Great Britain Application No.9814042.9. The Examiner indicated the whole document to be of relevance;

European Patent Application 0 084,727 A1, which was published on August 3, 1983, was cited as an "&" category document, (i.e., member of the same patent family), and an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 8, 14, 15, 19 and 20 of Great Britain Application No.9814042.9. The Examiner indicated the whole document to be of relevance; and

U.S. Patent No. 4,466,088 to TRETHEWEY, which issued August 14, 1984, was cited as an "&" category document, (i.e., member of the same patent family), and an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 8, 14, 15, 19 and 20 of Great Britain Application No.9814042.9. The Examiner indicated the whole document to be of relevance.

A copy of a United Kingdom Search Report issued in counterpart Great Britain Application No. GB 9814042.9, dated November 11, 1998, was filed, in which the following additional document was cited:

Great Britain Patent Application 2 086,092 A, which was published on May 6, 1982, was cited as an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 8, 14, 15, 19 and 20 of Great Britain Application No.9814042.9. The Examiner indicated Figure 1 to be of relevance.

A copy of a United Kingdom Search Report issued in counterpart Great Britain Application No. GB 9813892.8, dated November 6, 1998, was filed, in which the following documents were cited:

U.S. Patent 5,365,504 to NOGUCHI, which issued November 15, 1994, was cited as an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 2, 15 and 18 of Great Britain Application No. 9813892.8; and

U.S. Patent 5,151,890 to YONEKUBO, which issued September 29, 1992, was cited as an "X" category document, (i.e., document indicating lack of novelty or inventive step), with respect to claims 1, 3, 5 and 18 of Great Britain Application No. 9813892.8.

A copy of a French Search Report issued in counterpart French Application No. 98 13577, dated June 23, 1999, was filed, in which the following documents were cited:

Patent Abstracts of Japan, vol. 012, no. 140 (P-696), dated April 28, 1988, which included an abstract of Japanese Patent Document JP 62 262017 (FUJITSU Ltd.), which was published November 14, 1987, was cited as being an "X" category document, (i.e., indicating document particularly relevant if taken alone) with respect to claims 1, 9 of French Patent

Application 98 13577; and cited as being an "A" category document, (i.e., indicating technological background), with respect to claims 2-8, and 11-14 of French Patent Application 98 13577. The French Examiner indicated the abstract and figures 1-4, 8 and 9 as being relevant;

Patent Abstracts of Japan, vol. 017, no. 505 (P-1611), dated September 10, 1993, which included an abstract of Japanese Patent Document JP 05 128561 (FUJITSU Ltd.), which was published May 25, 1993, was cited as being an "A" category document, (i.e., indicating technological background), with respect to claims 1-14 of French Patent Application 98 13577. The French Examiner indicated the abstract and figures 1-8 as being relevant;

U.S. Patent 5,220,550 to NAKAYAMA et al., which issued June 15, 1993, was cited as being an "A" category document, (i.e., indicating technological background), with respect to claims 1-12 of French Patent Application 98 13577. The French Examiner indicated the abstract, figures 3-14, and column 5, line 3 to column 8, line 64 as being relevant;

U.S. Patent 5,136,559 to NAKAYAMA, which issued August 4, 1992, was cited as being an "A" category document, (i.e., indicating technological background), with respect to claims 1-12 of French Patent Application 98 13577. The French Examiner indicated the abstract, figures 1 and 2, and column 3, line 18 to column 5, line 42 as being relevant; and

European Patent Application EP 0 907163 A, which was published April 7, 1999, was cited as an "E" category document, (i.e., indicating earlier patent document, but published on, or after the filing date), with respect to claims 1 and 9 of French Patent Application 98 13577. The French Examiner indicated the abstract, figure 3, and column 8, line 13 to column 9, line 15 as being relevant.

A copy of a Combined Search and Examination Report dated March 14, 2001, with respect to counterpart United Kingdom Patent Application No. GB 9813948.8, was filed, in which the following documents were cited:

U.S. Patent No. 4,893,891 to FUJITA et al., which issued January 16, 1990; and U.S. Patent No. 5,610,752 to HAYAKAWA, (previously cited) which issued March 1997.

Applicant respectfully requests that the Examiner consider the above materials and cite all of the documents. Applicant notes that copies of documents cited herein, that were cited during prosecution of the parent application or the grand-parent application, by either the Applicant or the Examiner, are not being submitted in accordance with 37 C.F.R. §1.98(d)(1). Accordingly, the Examiner is requested to initial the appropriate spaces on the attached PTO-1449 Form to confirm consideration of these documents and to return a copy of the Form to the Applicant with the next official communication in the present application.

Applicant also calls the following co-pending and commonly assigned related U.S. patent applications and U.S. Patents to the Examiner's attention:

- U.S. Patent Application 09/105,220 to T. KASE et al., entitled "Optical System For Optical Disk Drive", which was filed on June 26, 1998;
- U.S. Patent Application 09/166,092 to S. TAKISHIMA et al., entitled "Detecting System For Detecting Rotation Angle Of Deflection Mirror", which was filed on October 5, 1998;
- U.S. Patent Application 09/553,419 to NAKAGISHI et al., entitled "Rotary Arm of Optical Disk Drive," which was filed on April 20, 2000;
- U.S. Patent Application 09/177,567 to TAKISHIMA et al., entitled "Optical System For Optical Disc Drive", which was filed on October 23, 1998 and has been abandoned;
- U.S. Patent Application 09/152,329, entitled "Optical Data Recording/Reproducing Device", which was filed on September 14, 1998;
- U.S. Patent Application 09/217,813 to S. TAKISHIMA, entitled "Optical Head of Disk Drive", which was filed on December 22, 1998;
- U.S. Patent Application 09/267,709, entitled "Optical Disk Drive", which was filed on March 15, 1999;
- U.S. Patent Application 09/393,278, entitled "Optical Disk Device", which was filed on September 10, 1999;

U.S. Patent Application 09/482,147 to W. KUBO et al., entitled "Rotation Amount Detecting System Of Deflection Mirror For Optical Disk Drive", which was filed on January 12, 2000;

Applicant notes that copies of the above-mentioned patent applications were previously submitted in the parent application and thus, are not being submitted in accordance with 37 C.F.R. §1.98(d)(1).

U.S. Patent 6,292,447 to S. TAKISHIMA et al., which issued September 18, 2001;

U.S. Patent 6,333,910 to NISHIKAWA et al., which issued December 25, 2001;

U.S. Patent 6,341,106 to NAKANISHI et al., which issued January 22, 2002;

U.S. Patent 6,278,682 to TAKISHIMA et al., which issued August 21, 2001; and

U.S. Patent 6,344,917 to NAKAGISHI et al., which issued February 5, 2002.

In accordance with 37 C.F.R. §1.98(a)(2)(i), copies of the above-mentioned patents are attached hereto.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

May 21, 2002 GREENBLUM & BERNSTEIN, P.L.C. 1941 Roland Clarke Place Reston, VA 20191 (703) 716-1191 Respectfully submitted, Toshio NAKAGISHI

Bruce H. Bernstein

Reg. No. 29,027

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|----------|---|-----|-------|------|-------|--|-----|------------------|------------------------------|--|-------|----------|----------------------------|--|
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| TOWN S | | | | | | | | | U.S. PATENT | DOCUMENTS | | | | |
| EXAMINER | Г | юс | UMI | ENT | NU | MB | ER | DATE | | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE | |
| | 5 | 9 | 2 | 0 | 1 | 4 | 0 | 07/06/99 | NAKAGISHI e | et al. | | | | |
| | 5 | 4 | 2 | 2 | 8 | 7 | 2 | 06/06/95 | HSU et al. | | | | | |
| | 5 | 7 | 1 | 9 | 8 | 3 | 4 | 02/17/98 | FUTAGAWA 6 | et al. | | | | |
| | 5 | 8 | 4 | 4 | 6 | 7 | 6 | 12/01/98 | SOUTHAM et | al. | | | | |
| | 5 | 7 | 0 | 5 | 8 | 6 | 8 | 01/1998 | COX et al. | | | | | |
| | 5 | 6 | 2 | 5 | 2 | | | | BRADFIELD HAYAKAWA | | | | | |
| | 5 | 6 | 1 | 0 | 7 5 2 | | | 03/1997 | | | | | | |
| | 5 | 6 | 0 | 8 | 2 | 8 | 0 | 03/1997 | ТАМЕМОТО | et al. | | | | |
| | 5 | 4 | 6 | 1 | 4 | 9 | 8 | 10/24/95 | IWAO | | | | | |
| | 5 | 2 | 5 | 4 | 8 | 9 | 3 | 10/1993 | IDE | | | | | |
| | 4 | 3 | 5 | 1 | 5 | 9 | 6 | 09/1992 | OHNIWA et al | | | | | |
| | 4 | 0 | 8 | 8 | 9 | 1 | 4 | 05/1978 | AOKI | | | | - | |
| | 3 | 2 | 4 | 4 | 9 | 1 | 7 | 04/1996 | GUTE | | | | | |
| | 5 | 6 | 8 | 4 | 7 | 6 | 2 | 11/04/97 | KUBO | | | | | |
| | 5 | 1 | 2 | 5 | 7 | 5 | 0 | 06/30/92 | CORLE et al. | | | | | |
| | 4 | 9 | 6 | 8 | 8 | 7 | 6 | 11/06/90 | IIMA | - | | | | |
| | 4 | 2 | 9 | 7 | 7 | 1 | 3 | 10/27/81 | ICHIKAWA et | al. | | | | |
| | 5 | 1 | 2 | 6 | 8 | 9 | 9 | 06/30/92 | KANAZAWA | | | | | |
| | 5 | 5 | 6 | 4 | 5 | 8 | 5 | 10/15/96 | SAITOH | | | | | |
| | 5 | 7 | 6 | 8 | 2 | 4 | 1 | 06/16/98 | KANAZAWA | et al. | | | | |
| | 2 | 7 | 5 | 0 | 4 | 6 | 1 | 06/1956 | BUNCH | | | | | |
| | 4 | 1 | 2 | 6 | 7 | 9 | 6 | 11/1978 | ITO | | | | | |
| | 5 | 8 | 8 | 6 | 4 | 3 | 8 | 03/1999 | KAWANISHI | | | | | |
| | 4 | 2 | 0 | 6 | 3 | 7 | 9 | 06/1980 | OWDA | | | | | |
| · | 4 | 8 | 9 | 3 | 8 | 9 | 1 | 01/16/90 | FUJITA et al. | | | | | |
| | 3 | 3 | 5 | 4 | 8 | 3 | 3 | <i>إ</i> 11/1967 | LAING | | | | | |

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance

and not considered. Include copy of this form with next communication to applicant.

| Patent and | | | | | | | | | | of Commerce emark Office | | Atty. Docket No. Serial No. 10/067,037 | | | | | |
|--|----------|------|------|------|--------|------|-------|------|----------|-----------------------------|------------------|--|---|----------|-------------------------------|--|--|
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| | | 5 | 7 | 6 | 4 | 6 | 1 | 3 | 06/09/98 | YAMAMOTO | | | | | | | |
| | T | 5 | 5 | 9 | 6 | 4 | 4 | 6 | 01/21/97 | PLESKO | | | | | | | |
| | Γ | 5 | 5 | 3 | 2 | 4 | 8 | 0 | 07/02/96 | SCOFIELD | | | | | | | |
| | Γ | 4 | 8 | 9 | 1 | 9 | 9 | 8 | 01/09/90 | TOURVILLE | | | | | | | |
| | | 4 | 2 | 8 | 5 | 5 | 6 | 6 | 08/25/81 | УАМАМОТО | | | | | | | |
| | | 5 | 5 | 1 | 7 | 4 | 7 | 4 | 05/14/96 | TAKAMINE | | | | | | | |
| | | 5 | 4 | 4 | 4 | 6 | 8 | 3 | 08/22/95 | ISHIKAWA | ISHIKAWA | | | | | | |
| | | 4 | 9 | 5 | 9 | 8 | 2 | 4 | 09/25/90 | UEDA | UEDA | | | | | | |
| | Г | 4 | 4 | 6 | 6 | 0 | 8 | 8 | 08/14/84 | TRETHEWEY | | | | | | | |
| | | 5 | 4 | 2 | 0 | 8 | 4 | 8 | 05/30/95 | DATE et al. | | | | | | | |
| | | 5 | 3 | 6 | 5 | 5 | 0 | 4 | 11/15/94 | NOGUCHI | | | | | | | |
| | | 5 | 1 | 5 | 1 | 8 | 9 | 0 | 09/29/92 | YONEKUBO | | | | | | | |
| | | 5 | 2 | 2 | 0 | 5 | 5 | 0 | 06/15/93 | NAKAYAMA | | | | | | | |
| | | 5 | 1 | 3 | 6 | 5 | 5 | 9 | 08/04/92 | NAKAYAMA | | | | | | | |
| | | 5 | i | 7 | 3 | 7 | 9 | 7 | 12/22/92 | ZEDEKAR et a | al. | | | | | | |
| | | 5 | 8 | 1 | 1 | 9 | 0 | 3 | 09/22/98 | UENO et al. | | | | | | | |
| | | 4 | 6 | 1 | 3 | 7 | 7 | 8 | 09/23/86 | WROBEL et al. | | | | | | | |
| | | 4 | 7 | 0 | 0 | 2 | 5 | I | 10/13/87 | FUKE et al. | | | | | | | |
| | | 5 | 8 | 1 | 1 | 9 | 0 | 2 | 09/22/78 | SATO | | | | | | | |
| | | 6 | 1 | 6 | 6 | 8 | 8 | 9 | 12/26/00 | AOKI | | | | | | | |
| | | 6 | 3 | 7 | 6 | 9 | 5 | 3 | 04/23/02 | NAKAGISHI et | NAKAGISHI et al. | | | | | | |
| | | 6 | 2 | 9 | 2 | 4 | 4 | 7 | 09/18/01 | TAKISHIMA et | TAKISHIMA et al. | | | | | | |
| | | 6 | 3 | 3 | 3 | 9 | 1 | 0 | 12/25/01 | NISHIKAWA et al. | | al. | | | | | |
| | | 6 | 3 | 4 | 1 | 1 | 0 | 6 | 01/22/02 | NAKANISHI et al. | | d. | | | | | |
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| | | 1 | Pa | atent | Abs | tract | s of | Japa | n, Vol. 012, | no. 140 (P-696), d | ated April 18, 1988. | | | | | |
| | | 2 | Pa | atent | Abs | tract | s of | Japa | n, Vol. 017, | no. 505 (P-1611), | dated September 10, 19 | 93. | | | | |
| | | 3 | Α | An article entitled "Optical Magnetic Disk Device Of U.S. TeraStor Succeeds Tracking Control - Track Pitch Of 0.34 μ m | | | | | | | | | | | | |
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